BOEM ENVIRONMENTAL STUDIES PROGRAM: Ongoing Study

Region: Pacific

Planning Area(s): Washington-Oregon, Hawaii

Title: Pacific Regional Ocean Uses Atlas (PROUA)

BOEM Information Need(s) to be Addressed: BOEM is responsible for granting leases, easements, and rights-of-way for orderly, safe, and environmentally responsible renewable energy development activities on the OCS. In the Pacific OCS Region, BOEM has received several unsolicited requests for renewable energy leases and additional indications of interest in renewable energy development. Under the Energy Policy Act of 2005, BOEM must consider existing and potential uses when making decisions about renewable energy leasing and management. BOEM needs information about these uses in order to give them proper consideration; understanding the patterns and implications of human uses of the ocean is essential to planning for renewable energy development. Ocean use data will inform decisions as BOEM responds to prospective lease requests and will help to identify future areas of opportunity where the potential for conflicts with other established or emerging user groups is lowest. Specific BOEM needs that will be addressed by this project are: identify hot spots of existing ocean use; identify areas where conflicts with emerging uses are likely; highlight priority areas for more localized feasibility studies; and elucidate key stakeholder interests in specific planning areas. Enhanced understanding of ocean uses will also inform BOEM's regional contributions to the Marine Planning priority objective under the National Ocean Policy, adopted through Executive Order 13547.

Total BOEM Cost: $600,000 **Period of Performance:** FY 2012-2015

Conducting Organization: NOAA Coastal Services Center, Ocean Uses Team

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Description:
Background: In order to make informed regulatory decisions about renewable energy development on the OCS, BOEM requires information about how and where ocean areas are used for recreational, commercial, industrial, and cultural types of activities. As California already has a California Ocean Uses Atlas, BOEM requires this information offshore Washington, Oregon, and Hawaii. The PROUA will provide this information through spatial data on General Use Footprints (areas in which a given use is known to occur with some regularity, regardless of its frequency or intensity), Dominant Use Areas (areas routinely used by most users most of the time), and Anticipated Future Uses (areas considered by regional experts to be likely to experience expanded use as a result of demographic, economic, environmental, or other changes over time). Contextual information will also be provided as Supplemental Qualitative Data.

BOEM also requires information about potential conflicts and compatibilities between co-occurring uses, especially emerging renewable energy activities. The PROUA will provide this information through profiles of the core operational and ecosystem requirements that link each ocean use to a specific ocean area, tools to assess interactions among co-occurring uses, and areas where conflicts, compatibilities, and/or synergies are likely to occur with the addition of renewable energy activities.

The products of the PROUA project will include: geographic data files, electronic and paper maps, analytical conflict/compatibility tools in an appropriate format to be determined by BOEM, state reports, and a final project report.

The information provided by the PROUA will help BOEM to make well-informed regional energy planning and siting decisions, inform assessments of impacts, and inform cumulative effects analyses. Additionally, frequent conflicts, controversies, legal challenges, and procedural delays may be avoided.

There is existing information about human uses of the ocean and potential conflicts with offshore renewable energy development. However, the existing information is often limited to a small group of target uses, is not spatially continuous, and/or is not appropriate for the planning scales used by BOEM. The PROUA project will result in comprehensive and continuous spatial information on the full suite of ocean uses throughout the West Coast and Hawaii on scales appropriate for state- and regional-scale planning.

Objectives: Working from an overarching goal to inform spatial planning and management of emerging human uses in the U.S. EEZ, the Pacific Ocean Use Atlas Project has two primary objectives:

- Document patterns of existing and emerging ocean uses throughout the study areas in Washington, Oregon, and Hawaii.
- Identify potential areas of conflict and/or compatibility between proposed renewable energy areas (including facilities and onshore supporting infrastructure), and other ocean uses.

Methods: Summarized below are the approaches for the two components of this project: patterns and conflict analysis.

Documenting Ocean Use Patterns — Ocean use data are gathered in a participatory mapping workshop that relies on knowledge of community experts about the patterns of ocean uses occurring in the study areas. Prior to the mapping workshops, existing ocean use data are mined and compiled into a digital geo-database. Geospatial base layers (including bathymetry, nautical charts, coastal access layers, submarine features, habitat and substrate data, etc.), are gathered and compiled into a base-map that is used as the basis of interactive mapping. Scoping is conducted by meeting with regional managers and data users to identify data gaps, priority uses, and user communities. Ocean experts and stakeholders are invited to a series of mapping workshops wherein data are gathered using participatory GIS methods to document use patterns for a given range of ocean uses. Data are processed and compiled into a suite of GIS data and services, digital maps, and related analytical products. Key phases include:

- Scoping: Work with regional/state managers to identify data priorities and regional management issues to scope data needs with respect to ocean uses;
- Data Gathering: Hold workshops with ocean experts and stakeholders to map use patterns and gather information on use history and conflicts; and
- Analysis: Spatially document the full range of ocean uses occurring throughout the study region through maps and GIS data and services. Provide analytical products that identify use hot spots.

Identifying Areas of Conflicts and Compatibility — Using analytical tools being developed within NOAA, the project will evaluate the resulting patterns of ocean use to identify areas of potential conflict, compatibility, and synergy among existing uses and proposed renewable energy activities.

- Requirements: Identify for each ocean use, its core operational and ecosystem requirements in the area (e.g., access to fishing grounds, permanent installations on the seafloor, etc.).
- Interactions: Evaluate for common uses in the region, their potential to conflict with or enhance other uses including proposed renewable energy activities.
- Analysis: Identify areas within the planning region where conflicts, compatibilities, and/or synergies are likely to occur with the addition of renewable energy activities.

Current Status: The Interagency Agreement was awarded on June 21, 2012.

NOAA and BOEM partnered with Washington State agencies for the Washington geography of the PROUA. The Washington mapping workshops were held on April 15, 16, 18, and 19, 2013 in Port Angeles and Aberdeen. The data validation period for the Washington geography was August 19 through September 28, 2013, and the data validation webinar was held on September 4, 2013.

The Oregon mapping workshops were held on June 3, 5, and 7, 2013 in Portland, Coos Bay, and Newport. Data validation for Oregon is targeted for fall 2013.

Scoping and outreach for the Hawaii geography began in summer 2013. Hawaii workshops are targeted for March/April 2014.

Final Report Due: June 2015

Publications Completed: None at this time.

Affiliated WWW Sites: The California Ocean Uses Atlas was produced by the Ocean Uses Team through a partnership between NOAA's Marine Protected Areas Center and Marine Conservation Institute. Although that Project is not affiliated with BOEM or the PROUA, it provides an example of the types of products that will result from the PROUA for Washington, Oregon, and Hawaii.

Revised Date: September 25, 2013